

Rebuilding Greens - Where The Rubber Meets The Road, Ideas To Take To The Field

By Mike Huck, Agronomist

I am sure that many of you were surprised to read that the test for saturated conductivity (commonly referred to as infiltration or percolation rates) has the most "slop" in it, plus or minus 3.8" per hour! Of all the performance tests this is the most difficult to repeat with any accuracy. In fact, this inconsistency was the reason that infiltration rates were omitted from the 1989 revision of the construction recommendations. The fact that contractors, suppliers, architects and superintendents screamed so loud is why these guidelines were included in the 1993 revision of the recommendations, even considering their shortcomings.

Admittedly, I was also guilty of placing too much emphasis on infiltration rates when selecting a mix. So, let me borrow a quote from Tom Hoogheem of Monsanto and say "Don't base past actions on present knowledge." Since we now know infiltration is an extremely variable number, be the wiser for it, place more emphasis on particle size distribution and porosity. Particle size distribution is the most accurate and

repeatable data. If you have good particle size distribution, good internal drainage should follow, the same applies with air-filled and capillary porosity. With that behind us let's move onto a few hints to take to the field.

When sending samples for analysis, enclose a letter to the lab to let them know about your local climate, irrigation requirements, water quality, and any site specific information that may influence their recommendations. You cannot expect a laboratory located across the country to be aware of local conditions at each site, so help them out. Don't just perform a physical analysis, also test the mix's chemistry. Soil pH, and lime content are important to know. In fact, an Arizona lab reported a sand, fitting particle size guidelines, were so calcareous it nearly dissolved when treated with acid used to estimate lime content. A sand like this would fail following a few years of acidic fertilizer applications.

Generally, during large projects the sand supplier blends large batches to stockpile for

the project. Prior to accepting delivery, visit the supplier and collect samples from each "batch" for laboratory testing to be sure you will receive what was specified. Also test each delivery to your site. Who is to say that a loader operator at the sand plant did not mistakenly take the mix out of the wrong pile! Testing every third green at delivery would be a minimum. Testing every green would be ideal.

If there is no way to build adequate funds into the budget for testing, then collect rootzone mix samples from each green and store them in 1 gallon paint cans in the shop. If a problem develops at a later date you will have a representative sample of the original mix from each green. Testing the mix a year down the road will deliver different results because things change as roots grow, slough off and decay, not to mention what may be introduced by poor quality water.

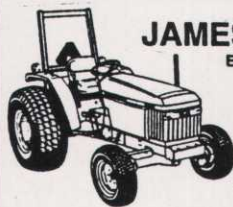
If you are concerned about moisture being drawn from the rootzone into the native

Continued on page 7

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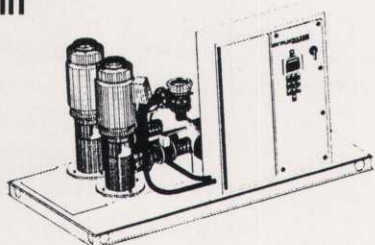
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Rebuilding Greens (Cont.)

surrounds, install a wicking barrier. A wicking barrier also serves a second purpose of keeping warm season grasses rhizomes from invading the rootzone.

Daylight the main drain tube at a high point behind the green in a valve box. This allows easy access to clear any future blockages. Also run the drain through a catch basin or valve box on the downstream end as an observations point to inspect flow after heavy rains or leaching. Placing a wire in each trench and stub it into the valve box where the drain is daylighted. This allows you to find exact locations with tracing equipment in the future. Also, placing a wire at perimeter of the green cavity will allow you to maintain the exact shape in years to come as mow lines

move or warm season grasses encroach.

If using a wheel tractor or skid steer loader to place the gravel, fill drain line trenches first and then place 3/4" plywood over them to protect tubing from being crushed. It is not advised to place or spread rootzone mix with a wheel tractor, it is too easy to spin the tires and mix the sand and gravel.

Finally, continue to sample and test topdressing materials regularly. In reality each delivery of topdressing purchased should be tested! If you budget can't afford lab tests then get a set of sieves, a good scale, and a calculator monitor particle size distribution. It does no good to go through all the pain, agony and hard work of constructing greens properly if

you just screw it up with bad topdressing. (You certainly wouldn't use contaminated motor oil in a brand new engine now would you?)

As mentioned earlier, be sure you are receiving what you specify and don't be afraid to let suppliers know when you are not happy with their product. Don't be bullied, don't accept any materials that are not within the guidelines. If you don't monitor the standards for your course, why would your supplier? If suppliers know you are testing on a regular basis, they will be forced to deliver a quality product. If you would like a more extensive quality control checklist, give our office a call, we have an excellent article written by Jim Moore on this subject. ♦

Golf Writers Encourage Communication

By Bob Costa

A panel discussion among three local golf writers and a golf course superintendent triggered a lively debate at the June meeting held at Adobe Creek. Ralph Chatoian - Marin Independent Journal, Bruce Meadows - Santa Rosa Press Democrat, Doug Saunders - Independent and Rick Hansen - Windsor Golf Club maintained a captive audience during the hour long discussion. The group of writers encouraged golf course superintendents to get to know their local writers. Developing a relationship with local writers and other members of the media, they felt, provides a conduit for communicating with golf course staff. As a result, future stories

involving the golf course are likely to appear more accurate and technically correct.

Hansen, who's course plays host to a Nike event spoke first hand about how his relationship with a local writer resulted in a fair and accurate story regarding course conditions. He felt because of the relationship he had established, every effort was made to obtain the facts before the article went to press. And when it did, the story was more forgiving than he expected.

Doug Saunders, who has written several articles for Golf Course Management Magazine, emphasized how golfers awareness and curiosity about course conditions has grown,

increasing the exposure of the superintendent. As a result, he believes there is a need to educate golfers about the nuances of course maintenance. Saunders went on to say that superintendents need to be recognized by members of the media as the spokesperson for course conditions. "All too often," he said, "the General Manager, and Head Professional are quick to accept this role." Meadows, brought laughter to the group when he likened the superintendent to the crazed uncle who lives out back. "It's time for superintendents to step forward and be recognized," he said.

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